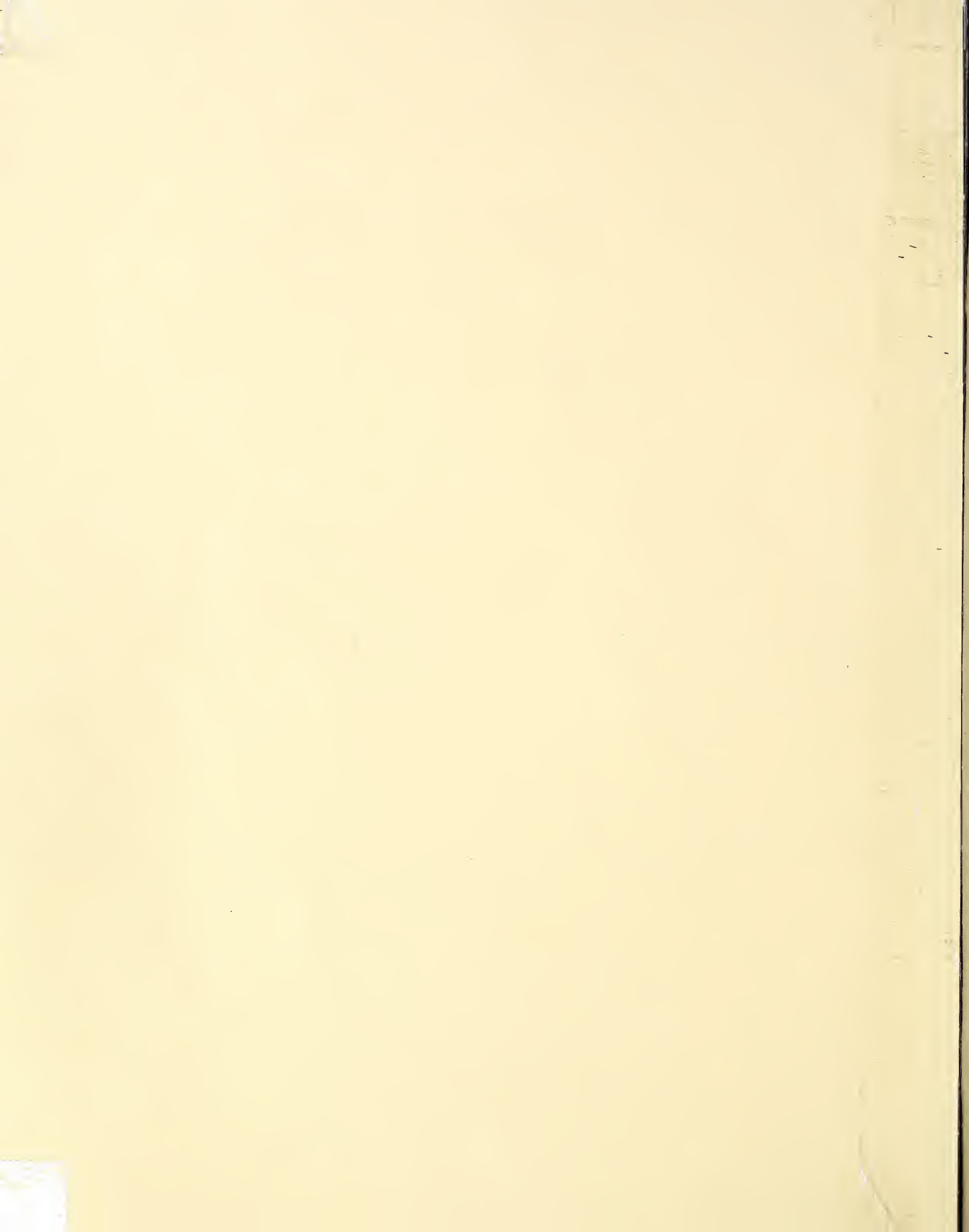


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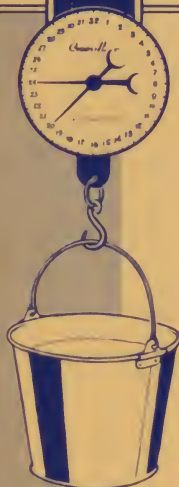
Do not assume content reflects current scientific knowledge, policies, or practices.



WEIGH-A-DAY- A-

MONTH

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Extension Workers' Manual



U. S. Federal Extension Service
U. S. DEPARTMENT OF AGRICULTURE

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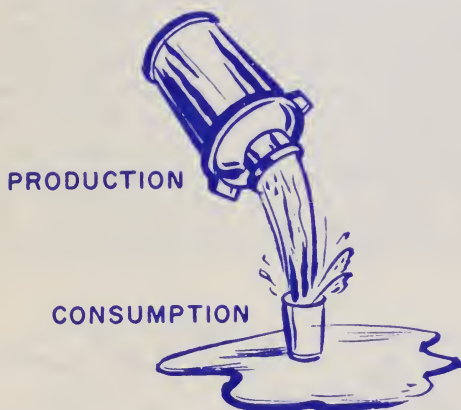
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The Department is vitally concerned with strengthening the position of dairy farmers and is looking to the Cooperative Extension Service for the educational leadership needed to help them make full use of the Weigh-a-Day plan. This extension workers can do by informing dairy farmers of the merits of the plan, by providing the necessary organizational guidance and services for implementing it, and by using the results as a demonstration of the value of good dairy management.

Ezra Taft Benson
Secretary of Agriculture

THE SITUATION.

Dairy farmers are caught in a tight cost-price squeeze caused by overproduction and rapid technological developments. There is no letup of this situation in sight. Longtime milk production is increasing at a faster rate than consumption, despite declining cow numbers and growing per capita consumption of milk. And the changes taking place in the production and marketing of milk require, in many cases, costly adjustments. This makes it imperative for dairymen to take a closer look at their total operations if they are to maintain or to improve their competitive position.



The apparent disparity between cow numbers and total milk production is due to the rapid increase in average production per cow which more than offsets the drop in cow numbers. Even though the surplus milk situation improved considerably in 1955 over what it was the previous 2 years, milk production still exceeded normal domestic consumption by some 4.7 billion pounds. And 1956 milk production is expected to exceed demand by about 5 billion pounds. Government purchase programs have removed most of the surplus production from the market. But the fact still remains that production is exceeding consumption in sufficient amount to depress prices and will probably continue this trend for some time.

While total milk production has increased from 101 billion to 123½ billion pounds during the past 20 years, the number of cows on farms has decreased from 24 to 21 million. This decrease has resulted from the disbanding of dairy enterprises on many farms. From 1949 to 1954, the number of farms producing milk for sale dropped 15 percent, from 1,096,650 to 934,133. The decline in cow numbers since 1945, alone, is more than the total number of milk cows on farms in Pennsylvania and all the States to the north and east in 1955.

Table 1.-- Milk cows, production per cow, and total production, by decades, 1935-55

Year	Milk cows on farms	Production per cow	Total production
	Millions	Pounds	Billion pounds
1935.....	24.2	4,184	101.2
1945.....	25.0	4,787	119.8
1955.....	21.2	5,815	123.5

Another significant change has been the increase in the size of herds among farmers staying in the dairy business. The average size of all dairy herds in 1950 was 5.8 cows. In 1954 it was 6.9 cows. Thus the overall trend in dairy farming is toward fewer, larger, and better herds.

Production Keeping Pace With Increased Consumption

Total milk consumption is steadily increasing. World War II restrictions and postwar changes in eating habits cut butter consumption in half between 1940 and 1953. This, quite naturally, reduced the per capita consumption of all dairy products on a milk equivalent basis. Actually, however, during this same period significant increases in the per capita consumption of cheese, ice cream, and nonfat dry milk were taking place. Since 1953, the per capita consumption of all dairy products, including butter, has increased.

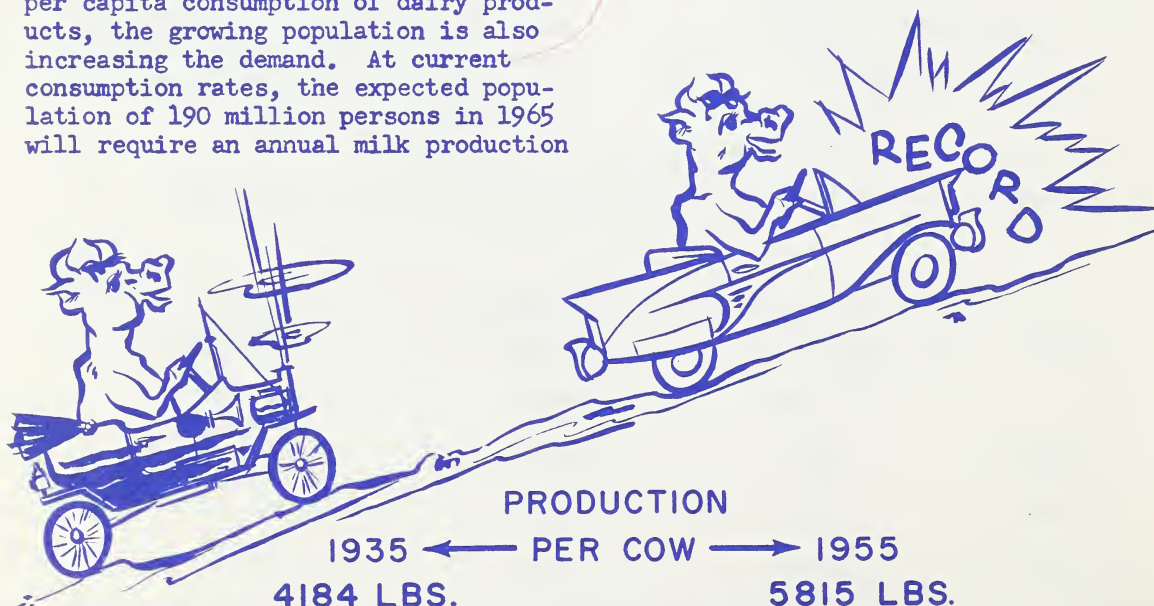
In addition to the increasing per capita consumption of dairy products, the growing population is also increasing the demand. At current consumption rates, the expected population of 190 million persons in 1965 will require an annual milk production

of 135 to 140 billion pounds, as contrasted with 123.5 billion in 1955.

But projecting the same increase in production per cow from 1955 to 1965 as has occurred during the past decade, average production per cow will have increased from the 5,815-pound level of 1955 to 6,800 pounds by 1965. Barring further decline in cow numbers from the present 21.2 million, total milk production in 1965 would amount to 144 billion pounds--still at least 4 billion pounds more than estimated total consumption.

Changing Conditions Complicate the Situation

Akin to the problem of overproduction is that of technological advancements taking place within the whole dairy industry. Significant changes in marketing requirements and procedures, along with the facilities needed to implement these, have increased production costs sharply in many areas. Those who are unable to make these changes are shifting from



dairying into other enterprises or employment. Those who have remained in dairying have been forced to take drastic steps to operate profitably.

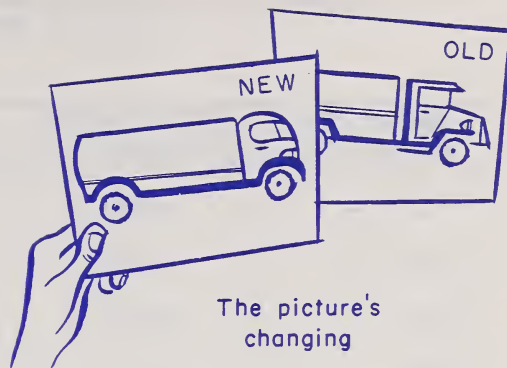
Bulk handling of milk, for instance, is bringing about changes in most milk-producing areas at an astonishing pace. The heavy capital investment required to make this shift has caused many dairymen to increase the size of their herds to keep unit costs down. It has caused others to leave dairying entirely. It has brought premium prices to some dairy farmers--to others the complete loss of their markets.

As these changes have taken place they have brought about a trend toward fewer and larger herds. This increase in herd size has enabled many dairymen to reduce costs by taking advantage of more specialization and mechanization. In the central Northeast area around New York State, for example, the number of farmers milking cows dropped 16 percent from 1950 to 1954. During the same period, milk cow numbers in this area increased 7 percent and average herd size 27 percent.

One reason for the decline in the number of dairy farmers in the Northeast has been the ability of marginal producers to find more remunerative employment elsewhere. Inability to utilize modern laborsaving machines and the necessity of investing in bulk storage tanks were other important factors in influencing the shift away from dairying.

WHAT DAIRY FARMERS CAN DO TO MEET THIS SITUATION.

Continued prospects for excess milk production coupled with rising production costs put a premium on efficient production--the best tool dairy farmers have for increasing their profits.



The picture's
changing

Individual dairymen have limited control over the price they receive for milk. On the other hand, they can do much toward reducing the cost of production. The tools for doing this are production records. They provide the necessary information for (1) culling out low-producing, unprofitable cows, (2) feeding each cow according to her ability, and (3) selecting the best animals from which to raise replacements. Likewise, production costs can be lowered and profits raised by the use of cost-cutting practices and by directing labor, land, and cow output at the most optimum level of return.

Effect of Production Levels on Costs

Dairy Herd Improvement Association records for 1953 and 1954 point up the cost of producing milk at different levels. Though feed costs were the only item listed, they represent only about one-half of the total cost of producing milk. As table 2 shows, costs drop sharply as production rises. Increasing production per cow by 1,000 pounds reduced the cost of production by 15 cents for each 100 pounds of milk produced. As expected, the drop in per unit cost diminished as the level of production rose. At low levels of production it dropped nearly 25 cents per hundredweight, as

Table 2.-- Cost of producing milk at different levels:
A study of DHIA records, 1953-54

Number of herds	Milk pounds per cow	Feed cost per cow	Feed cost per 100 pounds milk
137	4,000	\$126	\$ 3.15
1,929	6,000	149	2.48
4,392	8,000	173	2.16
4,188	10,000	189	1.89
2,312	12,000	205	1.70
372	14,000	226	1.61

contrasted with only 6 to 8 cents at high levels.

The figures in table 2 represent across-the-board DHIA averages; thus individual herds may vary greatly, depending upon the managerial ability of the operator and local conditions. Furthermore, year-by-year differences in feed costs and price levels bring about changes. But regardless of the change in feed costs, the relationships between costs at different levels of production do not change appreciably. Within the production range shown in the table, per unit feed costs go down as production goes up. Even more important, the same principle applies to all production costs, including labor (the second largest cost item), buildings and equipment, depreciation, and interest on investment.

Why Keep Records?

Increasing production per cow to the level of greatest total return over costs is the basis for building an efficient and profitable herd.

Production records provide the tool for doing this, as borne out by long-time DHIA records. Table 3 compares the production of cows on DHIA test in 1906, the year such testing was started, with the production of DHIA cows in 1954. Average production of all cows in the United States in corresponding years is also compared.

As shown in table 3, cows on DHIA test in 1954 produced 4,063 more pounds of milk and 157 more pounds of butterfat than cows on test in 1906. This is nearly $2\frac{1}{2}$ times the increase of 1,801 pounds of milk and 67 pounds of butterfat made by all cows during this period.

Since many dairymen start DHIA testing each year, the progress reflected in table 3 is not so great as that found in herds that have been on test continuously for a number of years. Studies of herds tested continuously in Iowa, for example, show an average increase of 50 pounds in butterfat production during the first 8 years of testing. This is a yearly average increase of approximately 6 pounds. Many of the herds, of course,

Table 3.-- DHIA cows and all cows: Average production compared, 1906 and 1954

Year	DHIA cows		All cows	
	Average milk	Average fat	Average milk	Average fat
1906.....	5,300	215	3,646	146
1954.....	9,363	372	5,447	213
Increase....	4,063	157	1,801	67

made better progress than this average.

Another indication of the improvement made in DHIA herds is the comparison of the number of cows at different levels of production over a period of years. In 1926, 22 percent of the cows on DHIA test produced less than 225 pounds of butterfat annually, and only 6 percent produced more than 425 pounds. The average butterfat production of all cows on DHIA test in 1926 was 289 pounds.

In contrast to this, only 7 percent of the cows on DHIA test produced less than 225 pounds of butterfat in 1953, and more than 24 percent exceeded the 425-pound level. Average butterfat production of all DHIA cows in 1953 was 368 pounds--an increase of 79 pounds over the 1926 level.

Records a Management Tool

Records in themselves are of little value. It is how they are used that counts. Thus the real value in recordkeeping is in its use as a management tool. The wide differences in levels of efficiency among dairy farmers spotlight good management as the key to profitable dairying.

A recent New York study of the

operations of 113 dairy farmers showed, for example, that 20 of the dairymen were making no return for their labor in producing milk. Thirty of the 113 dairy farmers made at least \$1 an hour for labor, and nine made \$2 or more an hour--a variation of more than \$2 an hour in labor return from the low to the high group. Farm cost records in most States tell a similar story.

It is because of this wide variation in efficiency of production that recordkeeping, the first step in management improvement, is being stressed. Records help a dairyman, the same as any farmer, to understand his business better and to make wise management decisions. Total dairy profits depend upon how much each cow in the herd returns. And the only way of knowing how well Bossy is producing--and whether it's at a profit or at a loss--is by keeping records.



Records are a basic management tool

THE WEIGH-A-DAY-A-MONTH PLAN

Why It Developed

Knowledge of the value of production records was the motivating force behind the organization 50 years ago in Michigan of the first cow testing associations (now DHIA's) in the United States. Within a few years similar associations were operating in all States. The number of associations and participating dairymen steadily grew. Since many dairy farmers keep records intermittently, no one knows how many dairymen have been members of DHIA's or similar plans during the past half century. But at no time have the number of herds and the number of cows enrolled in DHIA's been larger than on January 1, 1956. As of that time, these totaled 40,984 herds and 1,406,000 cows.

But despite the steady growth of membership in Dairy Herd Improvement Associations, 9 out of 10 dairymen in the United States keep no production records on their cows. And the number of cows on DHIA test represents only 5.5 percent of the total being milked. Combining this with the 375,000 cows on Owner-Sampler plan in

operation in 38 States brings the number of cows on test up to 7 percent of the total--still a very small percentage. The fact that dairy farmers who most need the help of production records are usually the ones who don't keep them makes this situation all the worse.

The Weigh-a-Day-a-Month plan grew out of joint industry, land-grant college, and Department of Agriculture recognition of the need for a simplified, low-cost recordkeeping plan that would have particular appeal to small-herd owners milking 14 cows or less who make up 91 percent of the Nation's total dairy farmers.

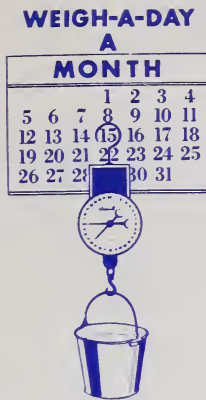
How It Developed

The new recordkeeping plan was developed by the Dairy Husbandry Research Branch of the Department's Agricultural Research Service with the help of the Extension Section of the American Dairy Science Association. It is somewhat similar to a plan tried out under field conditions in Illinois during the past 2 years which has proved to be quite successful.

The American Dairy Science Asso-



Only 1 in 10 dairymen keep production records



ciation approved the Weigh-a-Day program at its 1956 meeting. The plan also has the backing of dairy industry groups, farm organizations, and the Extension Committee on Organization and Policy of the American Association of Land-Grant Colleges and State Universities.

The new plan was given further impetus in the spring of 1956 when a special committee representing research, education, and industry recommended it as a means of providing large numbers of dairy farmers with basic information needed for developing efficient and profitable herds. This committee met with Federal Extension Service workers for the explicit purpose of developing a program for helping dairymen solve current production problems. The Weigh-a-Day plan was the major educational approach recommended by the committee for increasing dairy efficiency.

What It Is

The Weigh-a-Day-a-Month plan is a simple and low-cost system of keeping dairy records. It is specifically designed to meet the needs of dairymen who for various reasons are not now participating in the standard DHIA or Owner-Sampler plan of recordkeeping.

In addition to its simplicity, the appealing features of the plan are its adaptability to all herds, both small and large, and its low cost. Only records of milk production are kept by the dairy farmer. Because of this, Weigh-a-Day records are less complete than DHIA or Owner-Sampler records. They are, however, adequate for (1) locating loafers, (2) feeding each cow according to productive capacity, and (3) selecting the best cows from which to raise herd replacements. Because of this, Weigh-a-Day can help owners of both small and large herds to increase their efficiency through better herd management.

How It Operates

Dairy farmers enrolled in the Weigh-a-Day plan receive their record-keeping instructions from the county agent. They also agree (1) to pay in advance a year's fee, approximately 5 cents per cow per month, for the recordkeeping service, (2) to provide milk scales and a looseleaf record binder, and (3) to weigh the milk of each cow in the herd morning and evening on the 15th of each month, record these weights on the forms provided, and mail the forms to the county agent's office or to a designated computing service where the records are calculated.

The county agent, in cooperation with the local dairy committee, develops the Weigh-a-Day plan of recordkeeping in his county, carries out the necessary educational work for implementing it, and supervises its progress. He arranges for a computing service to calculate the records and return the information to participating farmers.

The Weigh-a-Day dairy committee, with the advice and counsel of the county agent, should have responsibil-

ity for operating the plan--that is, select secretary-treasurer, establish and collect Weigh-a-Day plan fees, and establish and pay for computing service. The Weigh-a-Day clerk may serve as secretary-treasurer and handle business of the plan. The clerk should work under the direction of the committee and under the general supervision of the county agent.

The computing service:

1. Receives the monthly record from each participating dairyman.
2. Calculates the monthly milk production of each cow, production to date for the year for each cow, and the monthly herd average.
3. Returns the calculated records to the herd owner, together with a form for the next month's recordings.
4. Provides a yearly summary of the production of each cow in the herd at the close of the recording year. (Detailed instructions for calculating the records are provided computing services. The suggested fees are adequate to pay satisfactory clerk wage rates to have the records calculated manually.)

The State extension dairyman supervises the program in each State, distributes all necessary forms and printed supplies to county agents along with suggestions for operating the plan, and makes State progress summaries.

The United States Department of Agriculture provides the recordkeeping forms and instructions needed for operating the plan and makes national summaries of progress to date on an annual basis.

SELLING THE WEIGH-
A-DAY PLAN LOCALLY

The new dairy recordkeeping plan is a challenging opportunity for helping dairy farmers improve their situation. Moreover, it is in keeping with the Extension philosophy of "helping people to help themselves." But like any challenge, it won't be an easy job nor will the objective be reached without strong local leadership and support. County agents, as the educational representatives of the State land-grant colleges and the Department of Agriculture, by necessity will have to take the lead in sparking local interest if the plan is to succeed.

Despite the proven value of dairy records, the big job--as evidenced by the small percentage of dairymen who keep records--is still that of convincing individual dairy farmers that it pays to keep them. To do this calls for presenting tangible local proof of increased efficiency and reduced costs resulting from recordkeeping. One of the best ways of doing this is by citing what local recordkeepers have accomplished and comparing this with county and State averages of nonrecordkeepers. Emphasis might well be placed on the current dairy situation in developing further proof of the need for keeping records.

RECORDS
PAY!



No special organization need be formed for launching and carrying out the Weigh-a-Day plan. Rather it would be well to work through existing dairy organizations and committees. In many counties there will be several who individually or jointly may want to sponsor the plan. Where this is the case, the job of informing farmers of the plan and selling them on its merits will be greatly reinforced.

If no sponsoring group is available, county agents might well consider appointing a steering committee from among existing extension advisory or dairy commodity committees to give the necessary guidance and support to the work. After the Weigh-a-Day plan gets into operation, participating farmers may want to form their own organization and elect their own officers.

How To Proceed

Here is a suggested procedure for launching the Weigh-a-Day plan in your county:

1. Present the plan to local dairy leaders for their approval and support. If you have a county dairy committee call it together to consider the merits of the plan. It would be a mistake to proceed without doing this.

- a. If you have no dairy committee in the county it would be wise to form one. When doing this, make sure the committee includes representatives of all dairy producer organizations in the county.

- b. Organized groups which should be interested in the new recordkeeping plan include:

- (1) Dairy Herd Improvement Associations.



Use local resources in launching Weigh-A-Day

- (2) Artificial breeding associations.
- (3) Milk producers' co-operatives.
- (4) Cooperative creameries.
- (5) County farm organizations.
- (6) Extension associations.

2. Make a survey of the dairy situation in your county. This might make a good project for your dairy committee.

- a. Obtain information on the number of cows in the county, number of dairy farmers, average herd size, average production per cow and per herd, and the importance of dairying to the county, including dairy income. State and county agricultural censuses are good sources of information.

- b. If possible, obtain information on the average cost of production and the range in production costs.

- c. Compare the dairy situation in your county--as evidenced by this information--with the situation in other counties in the State.

- d. Compare the performance of DHIA and Owner-Sampler herds with herds not on test.
 - e. Make a survey of market opportunities. Where do dairymen sell their products? What products do they sell and what prices do they receive?
3. Use this factual information as a basis for selling dairy recordkeeping, and the Weigh-a-Day plan as a method of keeping records, to the public in general and dairy farmers in particular.
- a. Provide copies of the leaflet Make Dairying Pay the Record Way and the publication Facts About the Weigh-a-Day-a-Month Plan for members of your dairy committee, press, radio, and television personnel, bankers, farm and civic leaders, and others whose support you'll need in launching the plan. Copies of both of these factual publications are contained in the overall kit on the recordkeeping program that has been furnished you. Copies of the leaflet Make Dairying Pay the Record Way are available in large quantities for general distribution.
 - b. Base your information program on the local situation and the need for recordkeeping. Make your information program a continuing week-by-week effort, highlighting various aspects of the dairy situation and recordkeeping each week.
 - c. Use statements from, and interviews with, dairy recordkeepers to strengthen your case on the value of keeping records.
 - d. Utilize mass communication media--press, radio, television, circular letters, window exhibits, posters, leaflets, and the like--as well as tours and meetings, for telling the story. Such a concerted effort will pay off in intelligent public understanding of the reasons for and the need of the Weigh-a-Day plan.
 - e. Supply informational materials on the Weigh-a-Day plan to dairy plant operators, dairy route truck drivers, artificial inseminators, and others who have regular contact with dairy farmers for distribution to these farmers.
4. Follow instructions in DHIA-WAD-4 (copy in kit) in working out details for implementing the new plan. This publication clearly sets forth the division of responsibilities among county agents, cooperating dairy farmers, the calculating service, the State Extension Service, and the Dairy Husbandry Research Branch of the Department of Agriculture.

INFORMATION PROGRAM

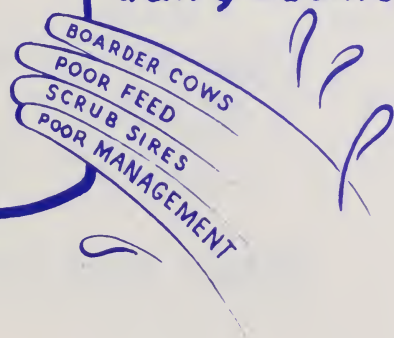
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2. Need for recordkeeping
3. Endorsement by recordkeepers



DAIRY SPOTS-1



**STOP
THE LEAKS
in your
dairy business**



**REPLACE
STAR
BOARDERS**

**WEIGH-A-DAY
A**



DAIRY SPOTS-2



WHO'S PRODUCING?



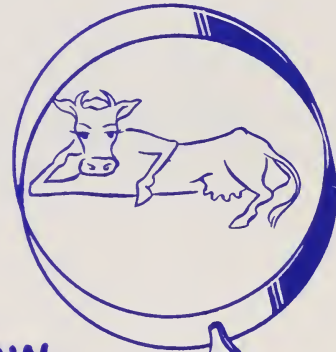
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COW**



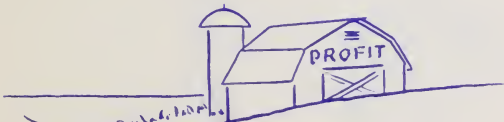
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BETTER FACE THEM



**KNOW
YOUR COWS**

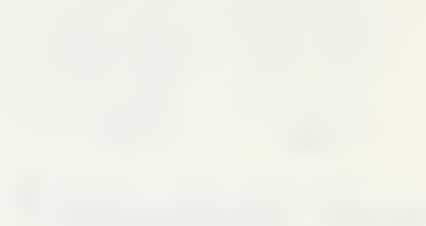


RECORDS



**FLOOD OF
RISING COST**

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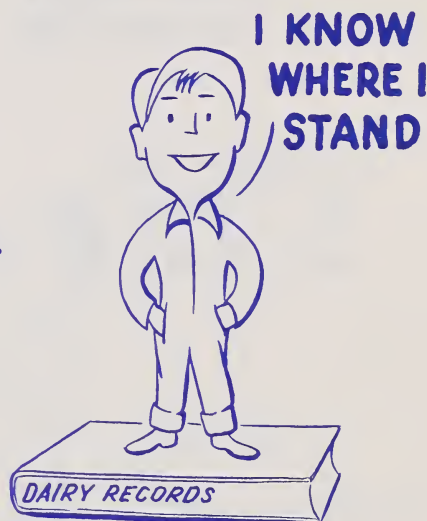
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2. Component Description



DAIRY SPOTS-3



DAIRY SPOTS-4



**THROW LIGHT ON
YOUR DAIRY
BUSINESS**

**HOW'M I
DOIN, BOSS?**



**YES! THERE'S
MONEY IN
DAIRYING**

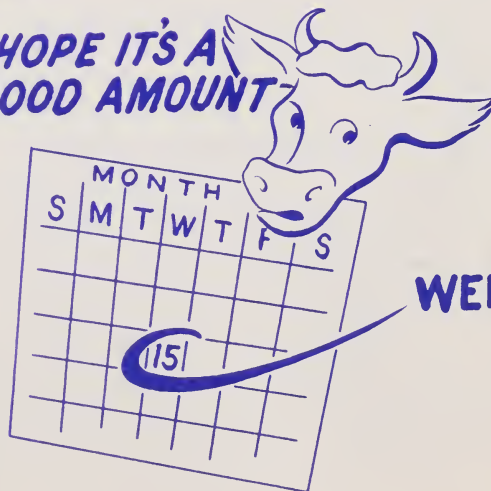


**LET RECORDS
SHOW YOU
THE WAY**

**WHOOPEE-
I'M MAKING
THE GRADE!**



**HOPE IT'S A
GOOD AMOUNT?**

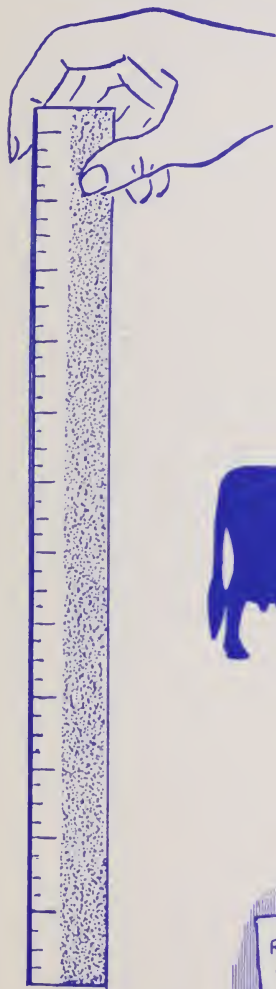


WEIGH

DAIRY SPOTS-5



Measuring Up



Time's running out!



THIS MAKES CENTS

